RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/744,167

DATE: 02/21/2001
TIME: 11:03:09

Input Set : A:\ES.txt
Output Set: N:\CRF3\02212001\I744167.raw







3 <110> APPLICANT: HSC Research and Development Limited Partnership
5 <120> TITLE OF INVENTION: SARA PROTEINS
7 <130> FILE REFERENCE: 3206-172/PAR
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/744,167
10 <141> CURRENT FILING DATE: 1999-07-20
12 <150> PRIOR APPLICATION NUMBER: 2,237,701
13 <151> PRIOR FILING DATE: 1998-07-20
15 <160> NUMBER OF SEQ ID NOS: 8
17 <170> SOFTWARE: PatentIn Ver. 2.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 4839
21 <212> TYPE: DNA
22 <213> ORGANISM: Homo sapiens
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27 tttcctcacc gatggagaat tacttccaag cagaagctta caacctggga caaggtgtta 180
28 gatgaatttg aacaaaacga agatgaaaca gtttcttcta ctttattgga tacaaagtgg 240
29 aataagattc tagatccccc ttctcaccgg ctgtcattta accctacttt ggccagtgtg 300
30 aatgaatctg cagtttctaa tgagtcacaa ccacaactga aagtcttctc cctggctcat 360
31 tcagctcccc tgaccacaga ggaagaggat cactgtgcta atggacagga ctgtaatcta 420
32 aatccagaga ttgccacaat gtggattgat gaaaatgctg ttgcagaaga ccagttaatt 480
33 aagagaaact atagttggga tgatcaatgc agtgctgttg aagtgggaga gaagaaatgt 540
34 ggaaacctgg cttgtctgcc agatgagaag aatgttcttg ttgtagccgt catgcataac 600
35 tgtgataaaa ggacattaca aaacgattta caggattgta ataattataa tagtcaatcc 660
36 cttatggatg cttttagctg ttcactggat aatgaaaaca gacaaactga tcaatttagt 720
37 tttagtataa atgagtccac tgaaaaagat atgaattcag agaaacaaat ggatccattg 780
38 aatagaccga aaacagaggg gagatctgtt aaccatctgt gtcctacttc atctgatagt 840
39 ctagccagtg tctgttcccc ttcacaatta aaggatgacg gaagtatagg tagagacccc 900
40 tccatgtctg cgattacaag tttaacggtt gattcagtaa tctcatccca gggaacagat 960
41 ggatgtcctg ctgttaaaaa gcaagagaac tatataccag atgaggacct cactggcaaa 1020
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44 ttacctttgc ttctcaaacc agacatgcct aatgggtctg gaaggaataa tgactgtgaa 1200
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57 gaccatttac aaaatgactt tcctgcaaac agtggaaata atactaaaaa taaaaatgat 1980

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58 attcttggga aagcaaaatt aggggaaaac tcagcaacca atgtatgcag tccatctttg 2040
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108 <210> SEQ ID NO: 2

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<211> LENGTH: 1323
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 2

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Lys Cys Gly Asn Leu Ala Cys Leu Pro Asp Glu Lys Asn Val Leu Val
        35                  40                  45
Val Ala Val Met His Asn Cys Asp Lys Arg Thr Leu Gln Asn Asp Leu
    50                  55                  60
Gln Asp Cys Asn Asn Tyr Asn Ser Gln Ser Leu Met Asp Ala Phe Ser
65                  70                  75                  80
Cys Ser Leu Asp Asn Glu Asn Arg Gln Thr Asp Gln Phe Ser Phe Ser
                85                  90                  95
Ile Asn Glu Ser Thr Glu Lys Asp Met Asn Ser Glu Lys Gln Met Asp
            100                 105                 110
Pro Leu Asn Arg Pro Lys Thr Glu Gly Arg Ser Val Asn His Leu Cys
        115                 120                 125
Pro Thr Ser Ser Asp Ser Leu Ala Ser Val Cys Ser Pro Ser Gln Leu
    130                 135                 140
Lys Asp Asp Gly Ser Ile Gly Arg Asp Pro Ser Met Ser Ala Ile Thr
145                 150                 155                 160
Ser Leu Thr Val Asp Ser Val Ile Ser Ser Gln Gly Thr Asp Gly Cys
                165                 170                 175
Pro Ala Val Lys Lys Gln Glu Asn Tyr Ile Pro Asp Glu Asp Leu Thr
            180                 185                 190
Gly Lys Ile Ser Ser Pro Arg Thr Asp Leu Gly Ser Pro Asn Ser Phe
        195                 200                 205
Ser His Met Ser Glu Gly Ile Leu Met Lys Lys Glu Pro Ala Glu Glu
    210                 215                 220
Ser Thr Thr Glu Glu Ser Leu Arg Ser Gly Leu Pro Leu Leu Leu Lys
225                 230                 235                 240
Pro Asp Met Pro Asn Gly Ser Gly Arg Asn Asn Asp Cys Glu Arg Cys
                245                 250                 255
Ser Asp Cys Leu Val Pro Asn Glu Val Arg Ala Asp Glu Asn Glu Gly
            260                 265                 270
Tyr Glu His Glu Glu Thr Leu Gly Thr Thr Glu Phe Leu Asn Met Thr
        275                 280                 285
Glu His Phe Ser Glu Ser Gln Asp Met Thr Asn Trp Lys Leu Thr Lys
    290                 295                 300
Leu Asn Glu Met Asn Asp Ser Gln Val Asn Glu Glu Lys Glu Lys Phe
305                 310                 315                 320
Leu Gln Ile Ser Gln Pro Glu Asp Thr Asn Gly Asp Ser Gly Gly Gln
                325                 330                 335
Cys Val Gly Leu Ala Asp Ala Gly Leu Asp Leu Lys Gly Thr Cys Ile
            340                 345                 350
Ser Glu Ser Glu Glu Cys Asp Phe Ser Thr Val Ile Asp Thr Pro Ala
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181          355                 360                 365
183 Ala Asn Tyr Leu Ser Asn Gly Cys Asp Ser Tyr Gly Met Gln Asp Pro
184      370                 375                 380
186 Gly Val Ser Phe Val Pro Lys Thr Leu Pro Ser Lys Glu Asp Ser Val
187 385                 390                 395                 400
189 Thr Glu Glu Lys Glu Ile Glu Glu Ser Lys Ser Glu Cys Tyr Ser Asn
190                 405                 410                 415
192 Ile Tyr Glu Gln Arg Gly Asn Glu Ala Thr Glu Gly Ser Gly Leu Leu
193             420                 425                 430
195 Leu Asn Ser Thr Gly Asp Leu Met Lys Lys Asn Tyr Leu His Asn Phe
196          435                 440                 445
198 Cys Ser Gln Val Pro Ser Val Leu Gly Gln Ser Ser Pro Lys Val Val
199      450                 455                 460
201 Ala Ser Leu Pro Ser Ile Ser Val Pro Phe Gly Gly Ala Arg Pro Lys
202 465                 470                 475                 480
204 Gln Pro Ser Asn Leu Lys Leu Gln Ile Pro Lys Pro Leu Ser Asp His
205                 485                 490                 495
207 Leu Gln Asn Asp Phe Pro Ala Asn Ser Gly Asn Asn Thr Lys Asn Lys
208             500                 505                 510
210 Asn Asp Ile Leu Gly Lys Ala Lys Leu Gly Glu Asn Ser Ala Thr Asn
211          515                 520                 525
213 Val Cys Ser Pro Ser Leu Gly Asn Ile Ser Asn Val Asp Thr Asn Gly
214      530                 535                 540
216 Glu His Leu Glu Ser Tyr Glu Ala Glu Ile Ser Thr Arg Pro Cys Leu
217 545                 550                 555                 560
219 Ala Leu Ala Pro Asp Ser Pro Asp Asn Asp Leu Arg Ala Gly Gln Phe
220                 565                 570                 575
222 Gly Ile Ser Ala Arg Lys Pro Phe Thr Thr Leu Gly Glu Val Ala Pro
223             580                 585                 590
225 Val Trp Val Pro Asp Ser Gln Ala Pro Asn Cys Met Lys Cys Glu Ala
226          595                 600                 605
228 Arg Phe Thr Phe Thr Lys Arg Arg His His Cys Arg Ala Cys Gly Lys
229      610                 615                 620
231 Val Phe Cys Ala Ser Cys Cys Ser Leu Lys Cys Lys Leu Leu Tyr Met
232 625                 630                 635                 640
234 Asp Arg Lys Glu Ala Arg Val Cys Val Ile Cys His Ser Val Leu Met
235                 645                 650                 655
237 Asn Ala Gln Ala Trp Glu Asn Met Met Ser Ala Ser Ser Gln Ser Pro
238             660                 665                 670
240 Asn Pro Asn Asn Pro Ala Glu Tyr Cys Ser Thr Ile Pro Pro Leu Gln
241          675                 680                 685
243 Gln Ala Gln Ala Ser Gly Ala Leu Ser Ser Pro Pro Pro Thr Val Met
244      690                 695                 700
246 Val Pro Val Gly Val Leu Lys His Pro Gly Ala Glu Val Ala Gln Pro
247 705                 710                 715                 720
249 Arg Glu Gln Arg Arg Val Trp Phe Ala Asp Gly Ile Leu Pro Asn Gly
250                 725                 730                 735
252 Glu Val Ala Asp Ala Ala Lys Leu Thr Met Asn Gly Thr Ser Ser Ala
253             740                 745                 750
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258 Pro Leu Pro Ala Glu Thr Asp Ile Cys Leu Phe Ser Gly Ser Ile Thr
259     770                 775                 780
261 Gln Val Gly Ser Pro Val Gly Ser Ala Met Asn Leu Ile Pro Glu Asp
262 785                 790                 795                 800
264 Gly Leu Pro Pro Ile Leu Ile Ser Thr Gly Val Lys Gly Asp Tyr Ala
265                 805                 810                 815
267 Val Glu Glu Lys Pro Ser Gln Ile Ser Val Met Gln Gln Leu Glu Asp
268             820                 825                 830
270 Gly Gly Pro Asp Pro Leu Val Phe Val Leu Asn Ala Asn Leu Leu Ser
271         835                 840                 845
273 Met Val Lys Ile Val Asn Tyr Val Asn Arg Lys Cys Trp Cys Phe Thr
274     850                 855                 860
276 Thr Lys Gly Met His Ala Val Gly Gln Ser Glu Ile Val Ile Leu Leu
277 865                 870                 875                 880
279 Gln Cys Leu Pro Asp Glu Lys Cys Leu Pro Lys Asp Ile Phe Asn His
280                 885                 890                 895
282 Phe Val Gln Leu Tyr Arg Asp Ala Leu Ala Gly Asn Val Val Ser Asn
283             900                 905                 910
285 Leu Gly His Ser Phe Phe Ser Gln Ser Phe Leu Gly Ser Lys Glu His
286         915                 920                 925
288 Gly Gly Phe Leu Tyr Val Thr Ser Thr Tyr Gln Ser Leu Gln Asp Leu
289     930                 935                 940
291 Val Leu Pro Thr Pro Pro Tyr Leu Phe Gly Ile Leu Ile Gln Lys Trp
292 945                 950                 955                 960
294 Glu Thr Pro Trp Ala Lys Val Phe Pro Ile Arg Leu Met Leu Arg Leu
295                 965                 970                 975
297 Gly Ala Glu Tyr Arg Leu Tyr Pro Cys Pro Leu Phe Ser Val Arg Phe
298             980                 985                 990
300 Arg Lys Pro Leu Phe Gly Glu Thr Gly His Thr Ile Met Asn Leu Leu
301         995                1000                1005
303 Ala Asp Phe Arg Asn Tyr Gln Tyr Thr Leu Pro Val Val Gln Gly Leu
304    1010                1015                1020
306 Val Val Asp Met Glu Val Arg Lys Thr Ser Ile Lys Ile Pro Ser Asn
307 1025                1030                1035                1040
309 Arg Tyr Asn Glu Met Met Lys Ala Met Asn Lys Ser Asn Glu His Val
310                1045                1050                1055
312 Leu Ala Gly Gly Ala Cys Phe Asn Glu Lys Ala Asp Ser His Leu Val
313            1060                1065                1070
315 Cys Val Gln Asn Asp Asp Gly Asn Tyr Gln Thr Gln Ala Ile Ser Ile
316        1075                1080                1085
318 His Asn Gln Pro Arg Lys Val Thr Gly Ala Ser Phe Phe Val Phe Ser
319    1090                1095                1100
321 Gly Ala Leu Lys Ser Ser Ser Gly Tyr Leu Ala Lys Ser Ser Ile Val
322 1105                1110                1115                1120
324 Glu Asp Gly Val Met Val Gln Ile Thr Ala Glu Asn Met Asp Ser Leu
325                1125                1130                1135
327 Arg Gln Ala Leu Arg Glu Met Lys Asp Phe Thr Ile Thr Cys Gly Lys
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VERIFICATION SUMMARY
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L:9 M:270 C: Current Application Number differs, Replaced Current Application Number